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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,487	01/27/2004	Mario Boisvert	14-733C2D1	9537

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EXAMINER	
FLETCHER, MARLON T	
ART UNIT	PAPER NUMBER
2837	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/765,487	BOISVERT ET AL.	
	Examiner	Art Unit	
	Marlon T. Fletcher	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (4,831,509) in view of Wrenbeck et al. (5,436,539).

As recited in claims 1 and 2, Jones et al. disclose an apparatus for controlling motion of a motor driven element over a range of motion and for altering said motion when undesirable resistance to the motion is encountered, said apparatus comprising: a sensor for measuring a parameter of a motor coupled to the motor driven element that varies in response to a resistance to motion during all or part of a range of motion of the motor driven element (column 3, lines 7-16); a memory for storing a number of measurement values from the sensor based on measurements of said parameter over at least a portion of the range of motion (abstract; column 3, line 56 through column 4, line 14; and column 5, lines 26-57); a controller (microprocessor; figure 8) coupled to the memory for determining to de-activate the motor based on the measurement values stored in the memory as the motor driven element moves over its range of motion (column 4, lines 49-55); and a controller interface coupled to the motor for altering motion of said motor driven element in response to a determination made by the controller (column 4, lines 53-57), wherein altering is also in response to a determination that the parameter is outside the parameter range.

As recited in claims 3 and 31, Jones et al. disclose the method, wherein the motor driven element is a window or panel and additionally comprising reverse actuating the window or panel prior to moving said window or panel in a direction to close the window or panel (column 4, lines 55-57).

As recited in claim 4, Jones et al. disclose the method, additionally comprising maintaining a position of the window or panel based on the sensed parameter and the reverse actuation is initiated if a leading edge of the window or panel is near a closed position (column 3, lines 17-28).

As recited in claims 5, 10, and 11, Jones et al. disclose the method, movement is first initiated toward a closed position when a leading edge of the window or panel is near the closed position and wherein the reverse actuation is performed upon a sensing of an obstacle that is based on determining the parameter is outside the parameter range (column 3, lines 17-28; and column 4, lines 49-57).

As recited in claims 6 and 33, Jones et al. disclose an apparatus for controlling activation of a motor coupled to a motor vehicle window or panel for moving said. window or panel along a travel path and deactivating the motor if an obstacle is encountered by the window or panel, said apparatus comprising: a sensor for sensing movement of the window or panel and providing a sensor output signal related to a speed of movement of the window or panel (discussed above; a switch for controllably actuating the motor by providing an energization signal (figure 7), and a controller having an interface coupled to the sensor and the switch for controllably energizing the motor (figures 7 and 8); said controller sensing a collision with an obstruction when

power is applied to the controller by: monitoring movement of the window or panel by monitoring a signal from the sensor related to the movement of the window or panel (column 3, Lines 9-28), identifying a collision of the window or panel with an obstacle due to a change in the signal from the sensor that is related to a change in movement of the window or panel (column 3, line 56 through column 4, line 55); and outputting a control signal to said switch to deactivate said motor in response to a sensing of a collision between an obstacle and said window or panel (column 4, Lines 55-57).

As recited in claims 7, 29, and 35, Jones et al. disclose the apparatus, wherein the controller comprises a programmable controller including a processing unit for executing a control program and including a memory for storing multiple window or panel speed values corresponding to a signal received from the sensor (column 3, line 36 through column 4, line 39).

As recited in claims 8 and 30, Jones et al. disclose the apparatus, additionally comprising one or more limit switches for use by the controller to determine window or panel position for use in identifying a collision (column 5, Lines 26-57).

As recited in claim 9, Jones et al. disclose the apparatus, wherein the control program adjusts an obstacle detection threshold in real time based on immediate past measures of the signal sensed by the sensor to adapt to varying conditions encountered during operation of the window or panel (column 4, Lines 49-68)

As recited in claims 12, 19, 20, and 28, Jones et al. disclose apparatus for controlling activation of a motor for moving an object along a travel path and de-activating the motor if an obstacle is encountered by the object comprising: a) a

movement sensor for monitoring movement of the object as the motor moves said object along a travel path (discussed above; a switch for controlling energization of the motor with an energization signal (figure 7); and a controller (microprocessor) including an interface coupled to the switch means for controllably energizing the motor and said interface additionally coupling the controller to the movement sensor for monitoring signals from said movement sensor (discussed above; said controller comprising a stored program that: determines motor speed from an output signal from the movement sensor (column 3, lines 17-28); calculates an obstacle detect threshold based on motor speed of movement detected during at least one prior period of motor operation (column 3, lines 39-47); compares a value based on currently sensed motor movement with the obstacle detect threshold (column 3, lines 48-55., and column 3, Line 56 through column 4, line 14); and outputs a signal from the interface to said switch for stopping the motor if the comparison based on currently sensed motor movement indicates the object has contacted an obstacle (column 4, lines 49-57).

As recited in claim 13, Jones et al. disclose the apparatus, wherein the controller includes a buffer memory for storing successive values of motor movement for use in determining the obstacle detect threshold (column 3, Line 56 through column 4, Line 39).

As recited in claim 14, Jones et al. disclose the apparatus, wherein the controller includes a clock and an input from the movement sensor is in a form of a sequence of pulses and further wherein the controller counts clock signals occurrences between receipt of pulses to provide an indication of motor speed (column 3, Lines 9-10).

As recited in claim 15, Jones et al. disclose the apparatus, wherein the controller includes an interface for monitoring user actuation of control inputs for controlling movement of the window or panel and wherein the controller maintains a motor energization sequence a specified minimum time period in response to a short period user actuation of said control inputs to maintain position accuracy in monitoring a window or panel movement (column 3, Line 67 through column 4, line 14).

As recited in claim 16, Jones et al. disclose the apparatus, wherein the controller includes an interface for monitoring user actuation of control inputs for controlling movement of the object and wherein in response to a specified input the controller conducts a (calibration motor energization sequence to determine parameters of object (column 4, Lines 49 through column 5, Line 6).

As recited in claims 17 and 32, Jones et al. disclose the apparatus, wherein the motor is coupled to a motor vehicle window or panel and wherein the controller includes an interface for monitoring user actuation of control inputs for controlling movement of the window or panel and wherein the controller maintains a position indication which is updated in response movement of the window or panel and further wherein the controller reverse actuations the motor near an end point in an object path of travel to avoid false obstacle detection in the region of closure of the window or panel (column 4, lines 58-68).

As recited in claim 18, Jones et al. disclose the apparatus, wherein the sensor is a current sensor and wherein the controller includes means for adjusting the obstacle threshold based on dynamic motor current as sensed from the current sensor to take

into account varying loads experienced by the motor (column 4, Lines 15-46; and column 5, Line 60 through column 6, Line 34).

As recited in claim 23, Jones et al. disclose the apparatus, additionally comprising an obstacle detector having an output coupled to the controller that senses a disruption in a region through which the window or panel moves (discussed above).

As recited in claim 25, Jones et al. disclose the apparatus, wherein the obstacle detector comprises an infrared light source and detector (column 3, Lines 9-16).

Jones does not disclose that the motor driven element is in a vehicle. Jones et al. does not disclose **immediate** past measurements.

However, Wrenbeck et al. disclose an apparatus for controlling motion of a motor driven element in a vehicle over a range of motion and for altering said motion when undesirable resistance to said motion is encountered (abstract; and column 1, lines 5-9), said apparatus comprising: a sensor (20) for measuring a parameter of a motor coupled to the motor driven element that varies in response to a resistance to motion during all or part of a range of motion of the motor driven element; a memory (MEM) for storing a number of measurement values from the sensor based on immediate past measurements of said parameter over at least a portion of a present traversal of said motor driven element throuqh said range of motion (abstract; column 3, lines 51-59); a controller (CPU) coupled to the memory (MEM) for determining to de-activate the motor based on a most recent sensor measurement of the parameter and the immediate past measurement values stored in the memory as the motor driven element moves over its range of motion; and a controller interface coupled to the motor for

altering motion of said motor driven element in response to a determination made by the controller (figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Wrenbeck et al. with the teachings of Jones et al., because while Jones et al. does not disclose the panel being used in a vehicle, this is merely intended use, wherein Wrenbeck et al. provides the same for a window in a vehicle. As for the immediate past measurements, this limitation is not really defined. Even taken as the last past measurement, the fact that Jones et al. provides past measurements, it is obvious that the ability to measure and use the immediate past measurement is obtainable. Further Wrenbeck et al. provide the use of the immediate past measurement.

With respect to claims 21, 22, 24, 26, 27, and 34, Jones et al. do disclose optoelectronic sensors or transducers. Jones et al. do not disclose a variety of pickups or transducers.

Wrenbeck et al. disclose a Hall-effect sensor and a magnetic pick-up (column 3, lines 27-37).

It would be obvious to use any type of sensor, because the teachings merely provide alternate means for providing the same, wherein one could substitute one sensor or detector for another.

With respect to claims 36 and 37, Jones et al in view of Wrenbeck et al. disclose the claimed invention except for the range in which the measurements are taken (40 milliseconds). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to provide measurements at forty millisecond interval, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argued that the claims provided the panel or window being in a vehicle. While this is merely intended use, a reference has been provided to show this obvious teaching. The applicant further argues that the prior art does not provide the immediate past measurements from the sensors. However, the fact that past measurements can be taken, makes it obvious to one skilled in the art to provide measurements at any time in the past. The applicant also argues that speed of the motor is not measured, but rather speed of the motor driven element is measured. However, it is all relative, since the speed of the motor drives the movement of the motor driven element. Wrenbeck et al. further provide measuring motor speed. In light of the new rejection, it believed that the claims are met by the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marlon T. Fletcher whose telephone number is 571-272-2063. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MTF
03/18/2006

Marlon Fletcher
Primary Examiner